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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/655,710	09/05/2000	Suman Preet Singh Khanuja	056859/0107	8287
22428	7590	09/21/2004	EXAMINER	
FOLEY AND LARDNER SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			COE, SUSAN D	
			ART UNIT	PAPER NUMBER
			1654	

DATE MAILED: 09/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/655,710	<b>Applicant(s)</b> KHANUJA ET AL.	
	<b>Examiner</b> Susan D. Coe	<b>Art Unit</b> 1654	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 June 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,5,6,9 and 10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 5, 6, 9, and 10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. The amendment filed June 21, 2004, has been received and entered.
2. Claims 3 and 27 have been cancelled.
3. In the paper dated April 21, 2001, applicant elected without traverse antibacterial agents, specifically quinolones and fluoroquinolones for species A.
4. Claims 1, 5, 6, 9, and 10 are pending and are examined on the merits.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 5, 6, 9, and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 1 is indefinite because the phrases "said compound" in line 6 and "said extract" in line 8 lack antecedent basis. For the sake of examination "said compound" and "said extract" is assumed to refer the glycyrrhizic acid and the glycyrrhizin.
6. Claim 6 is indefinite because there is a lack of antecedent for the phrase "the antibacterial compounds" in the claim.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 1654

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by US Pat. No. 5,939,050 in light of Takino et al. (Planta Medica (1979), vol. 36, no. 1, pp. 74-8) as evidence of inherency.

Applicant's claims are directed to a composition comprising 1 micro-gram/ml of glycyrrhizic acid or glycyrrhizin in combination with an antibacterial agent. Glycyrrhizic acid and glycyrrhizin are the same compounds (see REGISTRY entry listing these two names as synonyms for the same compound).

US '050 teaches combining licorice extracts with antibacterial agents. US '050 teaches using various amounts of the extract. Specifically, US '050 teaches using 15.6 micro-grams/ml of licorice extract in combination with cocamidopropyl dimethylglycine to inhibit the growth of *Streptococcus mutans* (see Table 6). US '050 does not discuss the concentration of glycyrrhizic acid present in the licorice extract. However, Takino analyzes licorice extracts to determine the content of glycyrrhizic acid. Takino finds that licorice extracts contain 7.05 to 9.30% glycyrrhizic acid (see page 76, "Content of Glycyrrhizic acid in Liquorice Roots and Extracts"). 7.05% to 9.30% of 15.6 micro-grams/ml is about 1 micro-gram/ml. Thus, the composition taught by US '050 inherently contains the specified amounts of glycyrrhizic acid.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1654

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 5, 6, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat. No. 5,939,050, The Merck Index (Budavari et al. (eds) (1989), 11<sup>th</sup> edition, Merck & CO., Inc: New Jersey, entry numbers 2315, 6273, and 6617) and US Pat. No. 5,478,829 in light of Takino et al. (Planta Medica (1979), vol. 36, no. 1, pp. 74-8) as evidence of essential properties found in US '050.


With the inclusion of Takino, this is technically a new ground of rejection. However, it is still considered obvious to combine the licorice extracts of US '050 with the antibacterial compounds described in The Merck Index and US '829 for the reasons of record first set forth in the Office action of December 18, 2001 and maintained in all of the subsequent Office action.

9. No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan Coe whose telephone number is (571) 272-0963. The examiner can normally be reached on Monday to Thursday from 8:00 to 5:30 and on alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bruce Campell, can be reached on (571) 272-0974. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1600.

  
Susan D. Coe, Examiner  
September 17, 2004